

## REMARKS

Claims 1-5 and 9 have been amended.

The Examiner has rejected (1) claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over the Imai, et al. patent (U.S. Patent No. 6,771,882) in view of the Hori patent (U.S. Patent No. 5,991,504) and further in view the Fisher, et al. patent (U.S. Patent No. 7,133,068), and (2) claim 9 under 35 U.S.C. 103(a) as being unpatentable over the Imai, et al. patent in view of the Fisher, et al. patent. Applicant has amended Applicant's independent claims 1 and 9, and with respect to these claims and those dependent on claim 1, the Examiner's rejections are traversed.

Applicant has amended Applicant's independent claims 1 and 9 to better define Applicant's invention. More particularly, amended independent claim 1 recites a recording apparatus comprising: an imaging unit configured to image an object and output moving image data; a memory configured to store image data of one frame of the moving image data output from imaging unit; a compressing unit configured to compress information quantity of the moving image data output from the imaging unit and information quantity of the image data of one frame stored in the memory; a recording unit configured to move a magnetic tape and record the moving image data output from the compressing unit and repeatedly record the image data of the same one frame output from the compression unit as still image data in a plurality of tracks formed on the magnetic tape, wherein the recording unit records the image data of one frame in an n number of tracks (n is an integer of 1 or more) on the magnetic tape in a first recording mode for recording moving image data and still image data each having a first information quantity per one frame and records the image data of one frame in an m number of tracks (m is an integer greater than n) on the magnetic

tape in a second recording mode for recording moving image data and still image data each having a second information quantity larger than the first information quantity per one frame; a recording mode setting unit configured to set a recording mode of the recording apparatus between the first recording mode and the second recording mode; an instruction unit configured to provide a still image recording instruction to record of a still image; and a control unit configured to control the recording means so as to start recording on the magnetic medium still image data of the same one frame in response to the still image recording instruction provided by the instruction unit and to stop recording the still image data of the one frame a predetermined recording period after the recording was started, wherein the control unit changes the predetermined recording period for recording the still image data in accordance with the recording mode set by the recording mode setting unit, and, wherein the control unit changes the predetermined period for recording the still image data to a first predetermined period if the first recording mode is set by the recording mode setting unit, and changes the predetermined recording period to a second predetermined period shorter than the first predetermined period if the second recording mode is set by the recording mode setting unit.

Amended independent claim 9, in turn, recites a recording apparatus compressing information quantity of image data of one frame stored in a memory, recording the compressed image data of same one frame repeatedly as still image data in a plurality of tracks formed on a magnetic tape moved, and including a mode switch for setting a recording mode of the recording apparatus between a first recording mode for recording still image data having a first information quantity per one frame on the magnetic tape and a second recording mode for recording still image data having a second information quantity

larger than the first information quantity per one frame on the magnetic tape, wherein the recording apparatus records the image data of one frame in an n number of tracks (n is an integer of 1 or more) on the magnetic tape in the first recording mode and records the image data of one frame in an m number of tracks (m is an integer greater than n) in the second recording mode, wherein the recording apparatus starts recording on the magnetic tape still image data of the same one frame in response to a still image recording instruction and to stop recording the still image data of the same one frame a predetermined recording period after the recording was started, wherein the said recording apparatus changes the predetermined recording period for recording the still image data in accordance with the recording mode is set by the mode switch, and wherein the recording apparatus changing the predetermined period for recording the still image data to a first predetermined period if the first recording mode is set by the mode switch, and changing the predetermined recording period to a second predetermined period shorter than the first predetermined period if the second recording mode is set by the mode switch.

Such constructions are not taught or suggested by the cited art of record. More particularly, as can be appreciated from the above, amended independent claim 1 clearly recites that the recording apparatus of the present invention, which records moving image data and repeatedly records image data of the same one frame as still image data in a plurality of tracks formed on the magnetic tape, is arranged to record the image data of one frame in an n number of tracks (n is an integer of 1 or more) on the magnetic tape in a first recording mode and record the image data of one frame in an m number of tracks (m is an integer greater than n) on the magnetic tape in a second recording mode. Amended independent claim 1 further recites that the recording apparatus is further arranged to control

the recording to change a predetermined recording period for recording the still image data in accordance with the set recording mode in such a manner that the predetermined period is changed to a first predetermined period if the first recording mode is set and the predetermined recording period is changed to a second predetermined period shorter than the first predetermined period if the second recording mode is set.

That is, the present claimed invention is directed to a recording apparatus which has two recording modes for recording image data having different information quantities per one frame in different number of tracks per one frame, respectively, and is arranged to change a predetermined recording period for recording the still image data in accordance with the set recording mode. In the recording apparatus of the present claimed invention, the number of tracks for recording the image data of one frame in the first recording mode is less than that in the second recording mode, and this means that if the image data is recorded in each of the first and second recording modes for a same recording period, then the number of tracks in which the still image data is recorded in the first recording mode is smaller than that in the second recording mode. As a result, if the magnetic tape is moved at higher speed to search the recorded still image data, it may be more difficult for the still image data recorded in the first recording mode than that in the second recording mode to detect the recorded still image from the magnetic tape. The present claimed invention solves this problem by providing a longer recording period of the still image data in the first recording mode than in the second recording mode.

Such constructions are not taught or suggested by the cited Imai, et al., Hori, et al. and the Fisher, et al. patents. In the Office Action, it is apparent that the Examiner has recognized that the Imai, et al. and the Hori, et al. patents fail to teach or suggest changing

the recording period of the still image in accordance with the recording mode set from among first and second recording modes and, in particular, setting the recording period to be shorter in the second recording mode in which the number of tracks and the information quantity per one frame of a recorded still image are greater than in the first mode. The Examiner, however, cites the Fisher, et al. reference and argues that the combination of the Fisher, et al., Imai, et al. and Hori, et al. results in applicant's claimed invention.

More particularly, the Examiner argues that the Fisher, et al. teaches "[w]herein said control means changes the predetermined recording period for recording the still image data between a first predetermined when the first recording mode setting means, and changes the predetermined recording period to a second predetermined period shorter than the first predetermined period when the second recording mode is set." While the Examiner takes this broad view of the Fisher, et al. patent, what the Fisher, et al. patent actually discloses is a system in which a camera is moved over an object and takes pictures of parts of the object as the camera is moving. The system of the patent then derives specific still frames from the camera picture data and stitches these frames together to form a composite image. The patent also teaches that by using the scanning speed and the width of a still frame, the frames can be selected at specific time interval to obtain frames that selectively overlap.

How these teachings can be applied to the systems of the Imai, et al. patent and the Hori, et al. patent is not evident to applicant. The basic teaching used by the Examiner from the Imai, et al. patent is that you can record video signals from a video camera on a recording medium in a so called "SD mode" or "SDL mode". In the SDL mode a first number of tracks are recorded per frame and in the SD mode twice as many tracks are recorded per frame. The Imai, et al. patent also teaches that if you record the same image

data repeatedly, a still image is recorded. The Hori, et al. patent discloses the same basic teachings of recording images on tracks in the SD and SDL modes, but the patent and much of its teachings relied on by the Examiner are actually for reproducing images already recorded in the SD or SDL mode, and not for recording images in these modes. In any case, the Hori, et al. patent, to the extent it discusses recording, like the Imai, et al. patent discusses it in the context of recording images in tracks on a recording medium in the SD and SDL modes.

The Imai, et al. and Hori, et al. patents thus do not have a moving camera trying to take pictures of an object, nor are they trying to obtain still frames from the camera output and stitch these frames together with desired overlap to generate a composite image of the object. Nor is there any need to control the selection of the still frames based on the moving speed of the camera and the frame width. None of this exists in the Imai, et al. and Hori, et al. systems. Since the Fisher, et al. patent can use different overlaps for different composites, the Examiner's position is that the different overlaps require deriving the images at different time intervals. However, this process in the Fisher, et al. patent has nothing to do with recording images on tracks of a recording medium in the SD and SDL modes as in the Imai, et al. and Hori, et al. systems, let alone selecting the time periods for recording images in these modes.

Thus, contrary to the Examiner's arguments it is not believed that the teachings of the Fisher, et al. patent would lead a skilled artisan to record images in tracks in the SD and SDL modes of the Imai, et al. and Hori, et al. patents at different recording periods, with the SD mode recording period being less than that of the SDL recording period. Applicant's amended independent claims 1 and 9, and their respective dependent claims, all of which

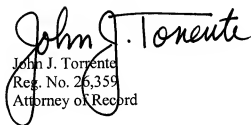
recite such features, thus patentably distinguish over the combination of the Imai, et al, Hori, et al. and Fisher, et al. patents.

In view of the above, it is submitted that applicant's claims, as amended, patentably distinguish over the cited art of record. Accordingly, reconsideration of the claims is respectfully requested.

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